# Florescent Lamp Recycling & Mercury Recovery Stewardship Project



### Who is the RCO

- Not for Profit Environment Organization whose mandate is to eliminate waste
- Members represent a variety of stakeholders including; municipalities, brandowners/manufacturers, industry associations, small/medium size businesses, other ENGOs, academics, consultants, other sister provincial organizations

### RCO's Work

- Educate and inform all members of society about the consequences of waste
- Conduct research to quantify and analyze the need for waste diversion programs and policies
- Support the development of effective environmental policies and programs
- Partner with stakeholders to facilitate a focus on waste reduction

# Florescent Lamp Diversion Pilot Project (May 2005)

- Funded by the Mercury Recovery Board
- RCO managed the project
- Partner Grand Erie District School Division Managed logistics of storing, tracking the tubes and ensuring delivery to recycler
- FLR recycled the tubes, tracked quantities, recover and recycle by-products

# Fluorescent Lamp Disposal at GEDSB

- GEDSB facility/staff survey revealed spent lamps were disposed in the regular garbage
- RCO completed a survey of 15 other school divisions in urban and rural settings around the province, all reported disposing of lamps with regular waste.

# Florescent Lamp Purchase & Disposal at GEDSB

- Supplied on a 5 year contract by Dominion Supplies
- GEDSB spends approximately \$25,000 annually on lamps
- GEDSB disposes of approximately 10,000 lamps (116,000 mg of mercury) annually through the regular disposal methods

# 3 Month Pilot Project with RCO

- GEDSB facility staff were asked to properly store spent lamps as they were randomly replaced
- RCO coordinated pick up of the tubes through FLR and GEDSB
- Important to note that GEDSB was retrofitting some of their facilities during the pilot program

# Mercury and Lamp Components Diverted from Landfill

#### Lamps collected during the Pilot project

Random Replacement – 390 lamps

(4524 mg of mercury)

Retrofit – 5568 Lamps

(69,112.80 mg of mercury)

1743.9 kg of glass

21.77 kg of aluminium

27.34 of phosphor

# **Pilot Key Outcomes**

- Ask GEDSB to adopt a permanent program to divert fluorescent lamps from landfill
- Issue a challenge to other school divisions in Ontario to recycle spent lamps
- Develop a provincial-wide voluntary stewardship program to divert all spent lamps from landfill

# The Stewardship Model

#### Rolled out in 2 Phases

- Phase 1 Focus on IC&I Generator
- Phase 2 Expand to residential markets

#### **Key Model Characteristics**

Model is financed by brand owners and generators. Distributors/Suppliers provide transport to recycler. RCO promotes, monitors and reports.

#### **Stewardship Model for Fluorescent Lamps**

#### Ontario Ministry of the Environment

- •Provide the approvals for the program to enable distributors/recyclers to "backhaul" spent materials
- •Designate florescent lamps under the WDA and recognizes the voluntary initiative under that designation

#### **Brand Owner** •Provides a rebate when new lamps are purchased. **Purchaser (Waste Generator)** •Promotes program and provides sales •Integrates "take back" service into supplier Information for tracking diversion results /distributor vendor agreements. Purchases new lamps from participating manufacturers. Properly stores lamps & facilitates take back service with supplier. •Pays for recycling with rebate. **RCO** •Promotes the program, •Facilitates partnerships, monitors, tracks and reports to all stakeholders. Maximizes participation. Distributor/Supplier •Takes back spent lamps when new lamps are •Tracks & reconciles deliveries between generator and recycler. •Provides a preferred recycling rate to participants •Receives all lamps, tracks, monitors & reports shipments to the generator. •Reports diversion results to RCO

# Pilot Project to Test the Stewardship Model

#### **Partners**

 RCO, Toronto District School Board, Panasonic, Ontario Ministry of the Environment

#### Scope

• 600 facilities, 5 months

#### **Timing**

• August 2006

# **Stewardship Pilot Next Steps**

- 1. Finalize all necessary government approvals
- 2. Agreement between RCO, FLR and TDSB
- 3. Redraft TDSB supplier/distributor contract
- 4. Develop communications for facility managers

#### **Key**

The pilot program must fairly test all aspects of the proposed stewardship model.

# **Scope of the Opportunity**

- In Canada; an estimated 60 70 million spent lamps are generated annually
- Each lamp contains on average, 11.6 mg of mercury
- 60 million lamps = 1,535 lbs of mercury

## **Thank You!**

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